

amended to specify, as recited in cancelled claim 2, that the alkenyl succinic anhydride is mixed with a surfactant prior to forming the emulsion. Claim 6 has been amended to invert the emulsifier-to-ASA ratio. Support for this amendment is found in the specification, *e.g.*, at p. 5, l. 27-30.

New claims 11-19 are directed to starch grafted cationic co-polymers comprising a reaction product of starch, acrylamide, and a diallyldialkyl ammonium halide. New claim 19 recites that the diallyldialkyl ammonium halide is diallyldimethyl ammonium chloride. Support for these claims is found, *inter alia*, at page 4, lines 12-18. Marked up versions of the amended claims showing the changes made in accordance with 37 C.F.R. § 1.121(c)(ii) are appended hereto. No new matter has been added as a result of the foregoing amendments.

The Rejection of Claims 1 and 4-8 under 35 U.S.C. § 102(b)

Claims 1 and 4-8 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Yamada *et al.* (JP 09111692 A; “Yamada”). By the foregoing amendment, claim 1 has been amended to incorporate the subject matter of cancelled claim 2. Therefore, this rejection is now moot. Applicants respectfully traverse this rejection insofar as it may be applied to claims 1 and 4-8 as amended.

For a claim to be anticipated, every element and limitation of the claimed invention must be found in a single prior art reference, arranged as in the claim. *Karsten Mfg. Corp. v. Cleveland Golf Co.*, 58 USPQ2d 1286, 1291 (Fed.Cir. 2001). (emphasis added). Claim 1 is directed to a process of emulsifying alkenyl succinic anhydride size (ASA) in which ASA is mixed with a surfactant prior to the emulsification.

In contrast to amended claim 1, Yamada fails to describe the use of a surfactant. In fact, Yamada explicitly states in the Abstract that a surfactant is not used. Thus, Yamada does not teach or even suggest a process that embodies every limitation of claim 1. Therefore, Yamada does not anticipate this claim. Similarly, Yamada does not anticipate claims 3-10 that depend from claim 1 and include further elements and limitations. For the above reasons, Applicants respectfully request that the rejection of claims 1 and 4-8 under 35 U.S.C. § 102(b) be withdrawn.

New claims 11-19 are directed to an emulsification process comprising blending an alkenyl succinic anhydride and a starch grafted cationic acrylamide co-polymer, wherein the co-polymer comprises a reaction product of starch, acrylamide, and a diallyldialkyl ammonium halide. In contrast to these claims, Yamada fails to describe or suggest that the starch grafted co-polymer comprises a reaction product of starch, acrylamide, and a diallyldialkyl ammonium halide. Therefore, Applicants respectfully submit that new claims 12-20 are also patentable over Yamada.

The Rejection of Claims 1-8 under 35 U.S.C. § 102(b) and 35 U.S.C. § 103(a)

Claims 1-2 and 4-8 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Aizono *et al.* (JP 2002265389 A; "Aizono"). Also, claim 3 has been rejected under 35 U.S.C. § 103(a) as being obvious over Aizono.

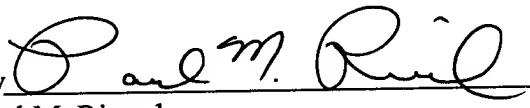
Aizono was published on September 26, 2002, which is less than one month before the present application was filed. Therefore, Applicants respectfully submit that Aizono does not constitute prior art under 35 U.S.C. § 102(b), which requires that the reference be published more than one year prior to Applicants' filing date.

To the extent that the reference may be applied as prior art under any other subsection of 35 U.S.C. § 102, Applicants file herewith a Declaration under 37 C.F.R. § 1.131 showing that the invention of claims 1 and 3-10 was reduced to practice prior to the September 26, 2000 publication date. Applicants respectfully submit that this showing is sufficient to antedate Aizono and remove the document as prior art. Accordingly, Applicants request that the rejections under 35 U.S.C. § 102 and 35 U.S.C. § 103 be withdrawn.

CONCLUSION

Accordingly, in view of the above amendments and remarks, all pending claims of this application are believed to be in condition for allowance, and such action is respectfully requested. This response is believed to completely address all of the issues raised Examiner's Office Action dated June 5, 2002.

Respectfully submitted,

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Enclosure:

Declaration Under 37 C.F.R. § 1.131

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VERSION OF AMENDED CLAIM WITH MARKINGS TO SHOW CHANGES

1. (amended) A process of emulsifying alkenyl succinic anhydride size comprising blending an alkenyl succinic anhydride and a starch grafted cationic acrylamide co-polymer under conditions sufficient to form an emulsion, wherein said alkenyl succinic anhydride is mixed with a surfactant prior to forming said emulsion.

6. (amended) The process of claim 1 wherein said alkenyl succinic anhydride and said starch grafted cationic acrylamide co-polymer are blended at a weight ratio of ~~alkenyl succinic anhydride to starch grafted cationic acrylamide~~ to alkenyl succinic anhydride of from about 0.01:1 to about 1:1.